AMAZON MALARIA INITIATIVE (AMI)
COMMUNICATION COMPONENT

QUARTERLY ACTIVITY REPORT

Reporting Period: October 1–December 31, 2015

Contract No. AID-527-C-13-00004

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FROM THE AMERICAN PEOPLE

LINKS MEDIA
Creating a Culture of Learning

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About Links Media

Links Media, LLC is a management consulting company based in the Washington D.C. metropolitan area, specializing in information technology and marketing communications. We provide advanced management consultation services to governments and private sector clients in the areas of health, environment, science and technology, biotechnology, governance, human rights, economic prosperity, conflict resolution, education, public engagement, risk and crisis management, and social entrepreneurship.

Recommended Citation

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Abbreviations and Acronyms

ACT	Artemisinin-Based Combination Therapy
AMI	Amazon Malaria Initiative
ASTMH	American Society of Tropical Medicine and Hygiene
CDC	United States Centers for Disease Control and Prevention
CNCC	Peru's National Center for Quality Control
COR	Contracting Officer's Representative
DIRESA	Regional Health Directorates of Peru
FAQ	Frequently Asked Questions
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
IDB	Inter-American Development Bank
IR	Intermediate Result
LAC	Latin America and Caribbean Region
MOH	Ministry of Health
MRA	Medicines Regulatory Authority
MSH	Management Sciences for Health
NGO	Non-governmental Organization
NMCP	National Malaria Control Program
PAHO/WHO	Pan American Health Organization
PMI	President's Malaria Initiative
RAVREDA	Amazon Network for the Surveillance of Antimalarial Drug Resistance
RBM	Roll Back Malaria Partnership
RDT	Rapid Diagnostic Test
SIAPS	USAID-funded Systems for Improved Access to Pharmaceuticals and Services Program
TA	Technical Assistance
US	United States of America
USP/PQM	United States Pharmacopeial Convention / Promoting the Quality of Medicines
USAID	United States Agency for International Development
VCS	Vector Control Services, Guyanese Ministry of Health
WHO	World Health Organization

Background

The United States Agency for International Development (USAID) launched the Amazon Malaria Initiative (AMI) in 2001 to improve the prevention and control of malaria in partner nations of the Amazon basin. The initiative's mission is to (i) ensure that national malaria control programs in the Amazon basin and selected Central American countries substantially incorporate best practices and (ii) promote evidence-based policy changes in the partner countries. From inception, AMI has maintained a comprehensive view of malaria prevention and control. Its initial focus was to build the evidence base to support the introduction of artemisinin-based combination therapy (ACT) for *P. falciparum* malaria in all Amazon basin countries, and to improve access to and quality of malaria diagnosis. As progress was made in introducing ACT, the areas of epidemiological surveillance, vector control, and systems strengthening received further attention.

USAID established AMI as a collaborative partnership among organizations (the AMI technical partners) that provide technical and scientific expertise and collaborate with the nations' ministries of health (MOHs) and national malaria control programs grouped in the Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA) to proactively address malaria prevention and control in a sustainable manner. The partner countries also collaborate with one another and maintain an ongoing exchange of information and expertise through South–South collaboration promoted and supported by AMI. Countries currently supported by AMI include Belize, Brazil, Colombia, Ecuador, Guatemala, Guyana, Honduras, Nicaragua, Panama, Peru, and Suriname.

The initiative's regional approach benefits partner countries through (i) training and technical assistance (TA), (ii) the development of standardized guidelines and protocols, (iii) the comparability of research and monitoring results within and across countries, and (iv) coordinated approaches to addressing shared problems.

This report describes Links Media's activities for this project for the period of October 1 through December 31, 2015. Also included is a summary of achievements and results, as well as suggested future activities, challenges, and solutions.

Overview

Under the Amazon Malaria Initiative (AMI) Communication Component, Links Media's activities are designed to strengthen AMI's role in improving malaria prevention and control in the Amazon basin and Central America through the application of strategic communication, outreach and dissemination approaches. During the period from October 1-December 31, 2015, Links Media worked directly with the National Malaria Control Programs (NMCPs) of Belize, Brazil, Colombia, Guyana, Guatemala, Ecuador, Honduras, Nicaragua, Panama, Peru, and Suriname to improve the use of communication interventions for malaria.

Activities by Intermediate Results

Work performed in Quarter 1 of Fiscal Year 2016 (FY16) significantly advanced the Amazon Malaria Initiative's three IRs by expanding and communicating the scientific evidence base in all of AMI's technical lines of work, and by ensuring that new audiences were reached with messages about malaria prevention and control.

IR 1 – Evidence base increased

At the American Society of Tropical Medicine and Hygiene (ASTMH) 64th Annual Meeting in Philadelphia, USA, Links Media presented a poster on malaria elimination in the LAC region: "So you say you want elimination? Using communication and advocacy to advance malaria elimination in the Americas." The poster analyzed qualitative data collected in the process of conducting communication assessments with 11 countries' NMCPs in 2014. By presenting at this meeting, Links Media was able to disseminate unique findings about malaria in the Americas to approximately 4,500 attendees from 98 countries, including public health officials, researchers, physicians, and military personnel who work with malaria and other infectious diseases.

IR 2 – Evidence base communicated and used

Links Media disseminated the evidence base on malaria in LAC through a variety of communication channels to reach decision-makers in LAC, public health officials, researchers, and international donors. Channels included the AMI project website, a highly interactive AMI Facebook Group Page, other social media platforms, an email listserve, and the UN website ReliefWeb.int. Knowledge management continued with the project website serving as the main hub for relevant information and materials. Knowledge disseminated from new publications served to keep multiple stakeholders abreast of the developments related to malaria in the Americas via traditional and digital media outreach, virtual meetings, as well as in-person events such as Malaria Day in the Americas 2015.

Links Media submitted a complete draft of the AMI initiative-wide annual report covering all partners' progress and activities during FY 2015, which included performance indicators, new success stories, and summaries of research findings. Once approved by USAID, the report will be an important vehicle for disseminating the knowledge base generated through AMI within the global health and development community.

We also disseminated numerous information products conceptualized in collaboration with other partners. These included fact sheets on malaria elimination and a Spanish-language malaria reading list, along with a quarterly bulletin detailing AMI partners' activities.

IR 3 - More inclusive and better informed policy process promoted

In coordination with PAHO/WHO, Links Media began preparations for a webinar on "Good Practices for Collaborating with Indigenous Peoples on Malaria Prevention and Control," to be held in early 2016.

Priority populations in the Brazilian Amazon including gold miners (*garimpeiros*), riverine, and indigenous populations were the focus of a meeting between Links Media and the Brazilian ministry of health on October 5, 2015. Building on technical assistance received from Links Media, Brazil's NMCP advanced the development of an education and social mobilization strategy for malaria from the ground up, by leading a workshop attended by decentralized malaria actors and diverse government agencies representing a variety of sectors.

From September-December 2015, Links Media advanced the conceptualization of a behavior change communication guide for Guyanese clinicians and community health workers to use with malaria patients. In addition, Links Media provided technical assistance to Guyana's Vector Control Services (VCS, as the NMCP is known locally) for the development of messages and materials about malaria for the general public in two of the country's endemic regions, 7 and 9.

Links Media continued to work with Colombian officials and the PAHO/WHO country office on revisions to a previously drafted policy paper to inform municipal and department-level decision-makers. The policy paper advocates for the application of lessons learned in health communication during the GFATM Colombia Malaria Project that ended in early 2015.

Other Quarter 4 activities are detailed below.

Reports and Plans

Delivered performance monitoring indicators to USAID in October 2015. Obtained USAID approval of detailed work plan for FY 2016 by mid-October.

Task 1. Design an AMI dissemination/communication strategy, and prepare annual dissemination/communication work plans.

1.1. Completed an annual dissemination/communication work plan for FY 2016 to accompany the AMI dissemination/communication strategy (*Deliverable 1.2*) and Links Media work plan. Plan included important deadlines for quarterly bulletin, annual report, and scientific conference contributions, and sought to align partners' outreach activities to effectively

disseminate and communicate information to malaria stakeholders in the region. Work plan was circulated internally among AMI implementing partners in September 2015.

1.2. As a complimentary activity, Links Media participated in the regional consultation meeting organized by PAHO/WHO in the Dominican Republic in October 2015 in order to provide technical input on the next five-year Strategy and Plan of Action for Malaria in the Americas 2016-2020. In follow-up to this activity, Links Media authored a document entitled, "Input for the *Strategy and Plan of Action for Malaria in the Americas 2016 – 2020* on a Communication and Knowledge Management Line of Action," which recommended objectives, strategic approaches, and indicators for the forthcoming five-year plan. The document was delivered to USAID and PAHO/WHO in December 2015.

Task 2. Communication strategies designed for each of six Amazon countries (Brazil, Colombia, Ecuador, Guyana, Suriname, Peru), and one communication strategy for the bloc of Central American countries (Belize, Guatemala, Honduras, Nicaragua, and Panama).

2.1 Uploaded all malaria communication strategies that Links Media developed in collaboration with NMCPs to the AMI project website.

2.2 Delivered the final Peru communication strategy focused on national malaria-readiness and improved coordination with regional stakeholders in the Loreto Region, after incorporating changes requested by the NMCP.

2.3 Sent the national malaria communication and advocacy strategy to Colombian ministry of health officials Mauricio Vera and Julio Padilla with a request for their input and collaboration on updating the strategy.

Task 3. Develop and produce messages, dissemination and communication materials and instruments.

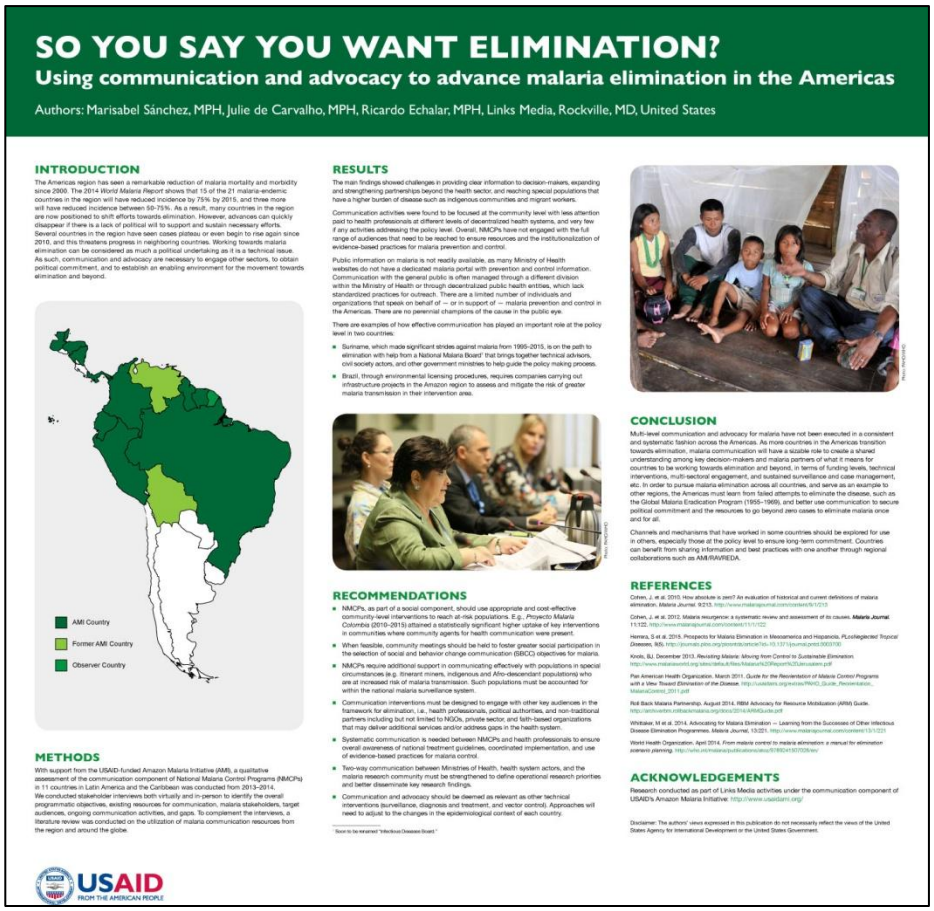
3.1. Participated in the Science of Eradication course held in São Paulo, Brazil from September 22 – October 2, 2015. In attending this course, Links Media participated actively in dialogue and shared valuable information on malaria communication efforts in the region, including important considerations as countries move towards elimination. At the conclusion of the course, Links Media staff invited all 100 participants to follow and actively participate on AMI social media platforms.

3.2. Met with Sheila Rodovalho at the Brazilian NMCP on October 5, 2015 and obtained approval to use the Santo Antônio and Jirau hydroelectric dams in Rondônia state as the topic of the malaria control success story to be drafted by Links Media. Obtained detailed information from the NMCP and the Rondônia state health secretariat for the writing of the success story. Subsequently submitted a draft of the success story to USAID, and made the decision in conjunction with USAID COR to turn the success story into a case study.

3.3. On October 28, 2015 Links Media traveled to Philadelphia, PA to present a scientific poster at the 64th annual meeting of the American Society for Tropical Medicine and Hygiene (ASTMH). This poster was shown during Poster Session C, and was titled "So you say you want elimination? Using communication and advocacy to advance malaria elimination in the Americas." See Figure 1, below. Links Media highlighted the communication work

performed through AMI, including efforts in AMI supported countries in Central America and possible perspectives for moving towards elimination.

Figure 1: Poster presented at ASTMH 64th Annual Meeting



3.4. On November 4, 2015, Links Media attended and live-tweeted a Capitol Hill briefing entitled "Defeating Malaria in the Americas" as an opportunity for stakeholder outreach and awareness.

3.5. For Malaria Day in the Americas and Malaria Champions of the Americas 2015, in November 2015, Links Media assisted PAHO/WHO with media pitching and stakeholder outreach. Issued a media advisory and conducted media pitching. *El Comercio* responded with an opportunity to publish a guest opinion editorial, and Links Media prepared a 530-word editorial piece in Spanish. Despite numerous follow-up attempts, however, USAID/Peru did not grant clearance to proceed with submission. See Annex 5 for the draft.

3.6. In collaboration with USP/PQM, drafted a success story on Peru's expansion of a systematic approach to medicine quality assurance/quality control in eight regions through the work of the National Center for Quality Control (CNCC), university partnerships, and TA from USP/PQM.

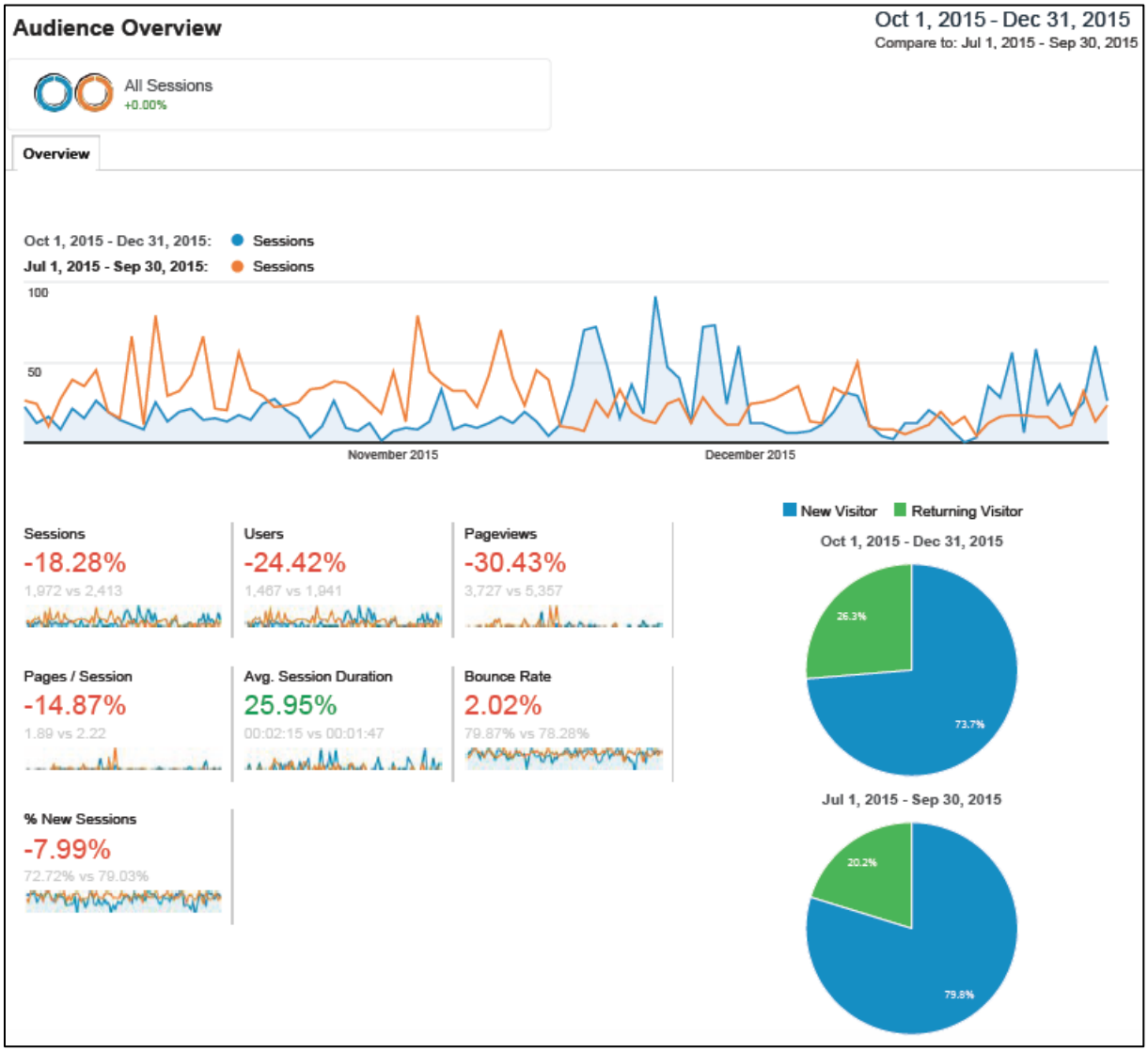
3.7. Upon the release of the World Malaria Report 2015, on December 9, 2015, Links Media developed key messages about the LAC region and disseminated report highlights in

English, Spanish, and Portuguese via the AMI website and a variety of social media platforms. Engagement led to increased website traffic in the month of December.

3.8. Links Media implemented weekly website updates (*Deliverables 3.2 and 3.4*). On the "Resources" section of the AMI website, we added two articles co-authored by the PAHO/WHO Regional Malaria Program and NMCPs in Colombia and Brazil, as well as new articles by external authors. These journal articles included:

- Carter KH et al. Malaria in the Americas: Trends from 1959 to 2011. *Am J Trop Med Hyg* 2015, 92 (2): 302-316.
- Griffing SM et al. A historical perspective on malaria control in Brazil. *Mem Inst Oswaldo Cruz* 2015, 110(5): 1-18.
- Lapouble. OMM., et al. 2015. Epidemiological situation of malaria in the Brazilian Amazon region, 2003 to 2012. *Pan American Journal of Public Health*. 38(4).
- Padilla, JC. et. al. 2015. Is there malaria transmission in urban settings in Colombia? *Malaria Journal*. 14(453).
- Reis, ICd., et al. 2015. Contribution of fish farming ponds to the production of immature *Anopheles spp*. in a malaria-endemic Amazonian town. *Malaria Journal*. 14(452).
- Reis, ICd., et al. 2015. Epidemic and Endemic Malaria Transmission Related to Fish Farming Ponds in the Amazon Frontier. *PLoS ONE*. 10(9).
- Whittaker, M. and Smith, C. 2015. Reimagining malaria: five reasons to strengthen community engagement in the lead up to malaria elimination. *Malaria Journal*. 14(410).

Figure 2: Website metrics for usaidami.org user sessions in Q1 FY16 vs. Q4 FY15 (Google Analytics)



3.9. Average session duration on the AMI project website lengthened this quarter, which is indicative of improved quality of content. The number of unique users visiting the website went to 1,467 from the previous quarter's 1,941 users. Of these, 73% were new visitors. A Google Analytics comparison with the previous quarter can be viewed in Figure 2, above.

Website visits peaked in early December with Links Media's promotion of the WHO's *World Malaria Report 2015*, which was shared via social media and uploaded to the AMI project website soon after it was released on December 9, 2015. This quarter's trends underscore the need to engage proactively in planned content promotion for the project website, activities which were not programmed in Links Media's contract scope of work.

3.10. Links Media developed and distributed Volume 2, Issue 4 of the quarterly AMI news bulletin (*Deliverable 3.5,* see Annex 1) to AMI stakeholders via an email list serve (549 subscribers), the AMI website, and social media. The bulletin detailed AMI technical and country partners' activities from July – September 2015, increased information sharing among partners, and also served as a tool for reaching external audiences like the international donor community, decision-makers in participating AMI countries, and the general public. Bulletin updates were obtained from PAHO/WHO, USAID/Peru, CDC, MSH, and USP. Activities in Brazil, Honduras, and Peru were highlighted from a country perspective. One hundred printed copies of the bulletin were distributed at the Malaria in the Americas Forum at PAHO headquarters on November 5, 2015. According to Bit.ly statistics, there were an additional 576 downloads of the AMI bulletin Volume 2, Issue 4. Whereas a PDF of the AMI bulletin was posted as content on other websites (e.g. ReliefWeb.int) without the same tracking tool, the total number of downloads from external websites is not known.

3.11. Transformed an approved 6-page fact sheet on "Malaria in Low-Incidence Settings" (see Annex 4) into a series of shorter fact sheets based on AMI/RAVREDA technical areas. Identified the need to add content on vector surveillance and control.

3.12. Finalized two USAID-approved communication tools related to malaria elimination in the region:

- "Malaria Elimination Frequently Asked Questions (FAQs)"
- "Selected References on Malaria Elimination"

"Malaria Elimination Frequently Asked Questions (FAQs)" was translated into Spanish and Portuguese, uploaded to the AMI website in all three languages, and distributed in hard copy at the November 5th PAHO/WHO forum in commemoration of Malaria Day in the Americas. The reading list, "Selected References on Malaria Elimination" was completed in English, Portuguese, and Spanish, however the links to the AMI Strategic Orientation Documents in English and Portuguese were not yet final by the end of the quarter, Links Media obtained USAID approval to disseminate the Spanish version of the reading list. Links Media coordinated with PAHO/WHO to ensure the finalization of the Strategic Orientation Documents and enable the creation of unique links for these language versions on the AMI and RAVREDA websites.

3.13. Through strategic and targeted communication efforts, Links Media continued to craft and disseminate messages about malaria prevention and control for audiences including AMI partner governments, donors, cooperation agencies, research institutions, and the general public through systematic traditional and social media engagement. During this quarter, Links Media was especially active in assisting other AMI implementing partner PAHO/WHO with communication efforts for Malaria Day in the Americas. PAHO/WHO and other Malaria Day in the Americas partners continued to use the social media hashtag #MalariaDayAmericas, which Links Media had recommended in 2014. As a result of these efforts, the highest engagement for social media involved the Malaria Day in the Americas event, where on Facebook a post naming Brazil as this year's Malaria Champion of the

Americas reached over 6,000 people.[1] Twitter followers grew by 6% to 874, membership in the LinkedIn group increased from 47 to 68 members, and Instagram followers decreased by three to 227. AMI's "Likes" on Facebook increased from 586 to 608.

3.14. On a monthly basis, met with PAHO/Washington in person to enhance coordination on a number of technical products, technical assistance, and the Malaria Day in the Americas 2015 event. Discussed possible website transfer in September 2016 to ensure continuity of the project-wide portal following the end of Links Media's contract.

Task 4. TA in the design and implementation of dissemination/communication strategies and/or activities provided to USAID and other AMI partners, including annual follow-up of and limited consultancy in the implementation of countries' communication strategies developed through Task 2.

4.1. Held a working session with the Brazilian NMCP in Brasília on October 5, 2015 following TA to help reach priority populations with messages about malaria prevention and control. Decentralized health system governance was addressed as the principal barrier to expediting implementation of specialized communication interventions for priority populations, especially itinerant miners. Agreed that the next steps were for the NMCP to gather input and secure buy-in of local actors in the decentralized health system. From October 6 - 8, 2015, Links Media participated in Brazil's First Workshop on Education and Social Participation for Malaria Surveillance and Control, which was attended by the country's Ministry of Health, Indigenous Health Secretariat, National Land Reform Institute, Ministry of Communications, Ministry of Education, Ministry of the Environment, and Ministry of Cities. Separately, provided the Ministry of Health with technical advice on the new national malaria elimination strategy in the area of communication.

4.2. Followed up with PAHO/Colombia representative Gabriela Rey on the Ministry of Health's review of an advocacy document (policy paper) on lessons learned about malaria communication. Reached agreements on dates for obtaining input from Colombia's national entomology laboratory on vector control content, and from Ministry of Health officials on overall content. Discussed plans to finalize the draft policy paper and disseminate it to key stakeholders at the municipal and department levels.

4.3. Held a conference call with Guyanese Vector Control Services (VCS) to proceed with the development of a clinician-patient communication guide for health professionals in regional trainings. Finalization may need to be postponed until June 2016. In addition, Links Media sought additional feedback from decentralized actors on the communication strategy and provided telephone TA to VCS on the design of billboards to be placed in two of Guyana's malaria-endemic regions (7 and 9). Links Media was able to continue supporting VCS in spite of the government leadership transition that followed the 2015 general election.

4.4. Followed up with the Suriname NMCP director Helene Hiwat about TA in support of a letter to be written to the Ministry of Finance regarding the need for additional resources for malaria elimination, to coincide with World Malaria Day (April 25, 2016). Copied malaria

[1] As compared to an average quarterly reach of 205 users per post, according to Facebook Insights.

researcher Malti Adhin and PAHO/Suriname representatives Dennis Navarro and Gustavo Bretas on communications.

4.5. Engaged with Panamanian NMCP to determine the status of education, communication and social mobilization plans in the AMI/RAVREDA annual work plan. Agreed to provide telephone TA in Q2 FY16, in coordination with PAHO/WHO.

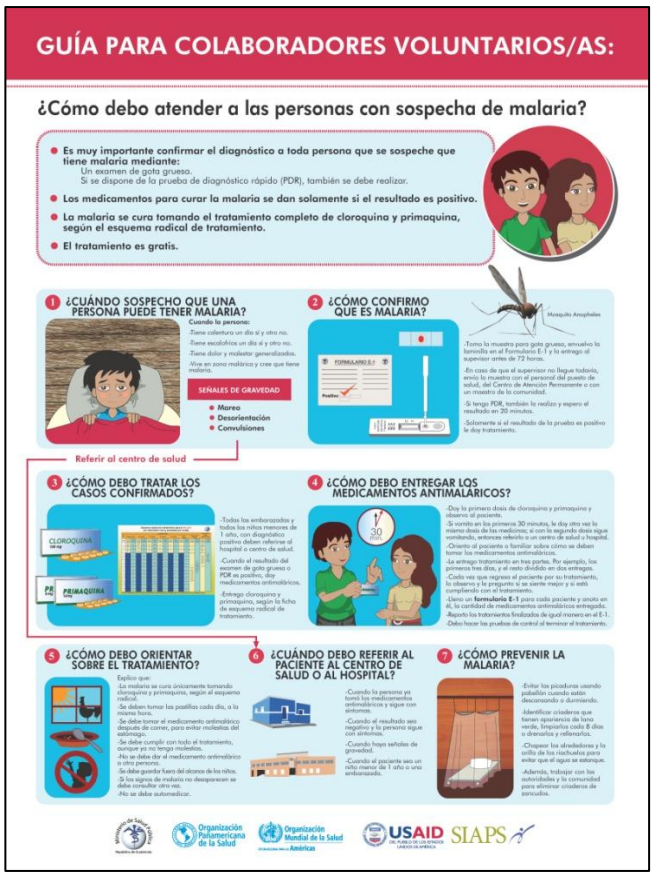
4.6. In preparation for a webinar on "Good Practices for Working with Indigenous Populations on Malaria Prevention and Control," Links Media collaborated with PAHO/WHO to develop and finalize a concept note (available in English, Spanish and Portuguese) and incorporated input from PAHO/WHO's Advisor on Ethnicity, Sandra Del Pino. Links Media also held a conference call with Debora Goddard, former director of the Bisira Health Center, regarding her experience in working with indigenous populations on malaria prevention and control in Panama. Links Media subsequently contacted the NMCPs of Brazil, Honduras and Panama with requests for permission to invite selected speakers.

4.7. Related to targeted TA under AMI, but not carried out with AMI funds, Links Media participated in a meeting of the newly-formed Regional Civil Society League for the Fight against Malaria in Central America. Held in Guatemala in November 2016, this meeting explored strategies for the mobilization of private sector resources for additional activities that would benefit the achievement of malaria elimination in Central America.

Task 5. Provide editorial support to other AMI partners for key dissemination/communication materials.

5.1. Completed graphic design assistance to the SIAPS program to modify and re-illustrate five materials previously designed as training collateral and job aids for health managers, clinicians, and community health workers in Guatemala. Following an extensive validation process with end-users in malaria-endemic areas, made illustrations more culturally appropriate and altered the text to reflect current MOH and medicines regulatory authority (MRA) guidance on pharmaceutical and case management. Completed additional changes to the text at the request of PAHO/Guatemala and the MOH prior to printing in December 2015. Materials are

Figure 3: Poster design for Guatemalan community health workers



expected to be used in trainings during the 2016 calendar year.

Future Activities

Per Links Media's annual work plan, the following activities are proposed for the period January 1 through March 31, 2016:

Task 1. Design an AMI dissemination/communication strategy, and prepare annual dissemination/communication work plans.

- Completed.

Task 2. Communication strategies designed for each of six Amazon countries (Brazil, Colombia, Ecuador, Guyana, Suriname, Peru), and one communication strategy for the bloc of Central American countries (Belize, Guatemala, Honduras, Nicaragua, and Panama).

- **Ecuador:** Continue to work with Ecuador's MOH to involve new officials in the process of revising the malaria communication strategy in the context of the new health structure.

Task 3. Develop and produce messages, dissemination and communication materials and instruments.

- Add a vector surveillance and control section, translate, lay out, and distribute a previously developed and approved series of fact sheets on the topic of "Malaria Control in Low-Incidence Settings"
- Obtain Brazilian NMCP's review of the case study on the Santo Antônio and Jirau hydroelectric dams in Rondônia state. Proceed with translation of the success story, and layout.
- Develop a new communication resource for country NMCPs on the topic of "Public Health Messages on Elimination."
- Update AMI website with Strategic Orientation Documents in Portuguese and English, and disseminate the documents to countries via email and social media.
- Conduct targeted stakeholder engagement via social media.

Task 4. TA in the design and implementation of dissemination/communication strategies and/or activities provided to USAID and other AMI partners, including annual follow-up of and limited consultancy in the implementation of countries' communication strategies developed through Task 2.

- **Regional:** Organize a webinar on good practices for working with indigenous peoples on malaria prevention and control to be held on or about February 16, 2016. The goal of the webinar will be to improve knowledge management on indigenous health issues in the region specifically related to malaria, in partial fulfillment of PAHO/WHO Resolution CD47.R18 on the Health of Indigenous Peoples in the Americas. The sharing of experiences will showcase unique approaches to addressing disparate malaria incidence rates seen between indigenous and non-indigenous populations in the Americas, in order to make progress towards malaria elimination.
- **Central America:** Develop virtual content on the role of non-traditional partnerships for malaria prevention and control, including public-private partnerships and resource mobilization with the sugarcane and the tourism industries.
- **Suriname:** Support the NMCP to refine communication strategy messages and activities, as a complement to other activities being carried out with funding from the Inter-American Development Bank (IDB) and GFATM. Conduct research for letter to be developed for the Minister of Finance.
- **Guyana:** Provide communication TA to complement regional trainings with health workers and gold miners on the use of rapid diagnostic tests (RDTs).
- **Peru:** Support the NMCP and the Regional Health Directorate in Loreto to develop Terms of Reference for a communication specialist to be mobilized in support of the emergency response to malaria. Provide examples of stakeholder and actor mapping exercises that could be used as examples for locally-hired services in the Loreto Region.

Task 5. Provide editorial support to other AMI partners for key dissemination/communication materials.

- Provide quality control of translations and graphic design support to PAHO/WHO to finalize three (3) AMI Strategic Orientation Documents, for a total of six (6) publications:

    - *Strategic Orientation Document for Malaria Vector Surveillance and Control in Latin America and the Caribbean* (English and Portuguese)
    - *Strategic Document on Supply Management and Quality Assurance for Drugs and Supplies Used in Malaria Diagnosis and Treatment* (English and Portuguese)
    - *Strategic Document on Monitoring the Effectiveness of and Resistance to Antimalarials in the Current Epidemiological Context* (English and Portuguese)

- Translate series of fact sheets on "Malaria in Low-Incidence Settings" into Spanish and Portuguese.

- Provide editorial support to USAID COR for a news article on AMI's contributions to malaria control in LAC over the last 15 years, and the challenges that lie ahead with many countries in the region aiming for elimination of the disease.

Challenges and Solutions

None to report.

Financials

Report on accrued expenditure will be submitted separately.

Environmental Compliance

All activities under the contract fall within those covered by the categorical exclusion as per Environmental Threshold Decision LAC-IEE-11-60.

Annex 1: Quarterly AMI News Bulletin

USAID
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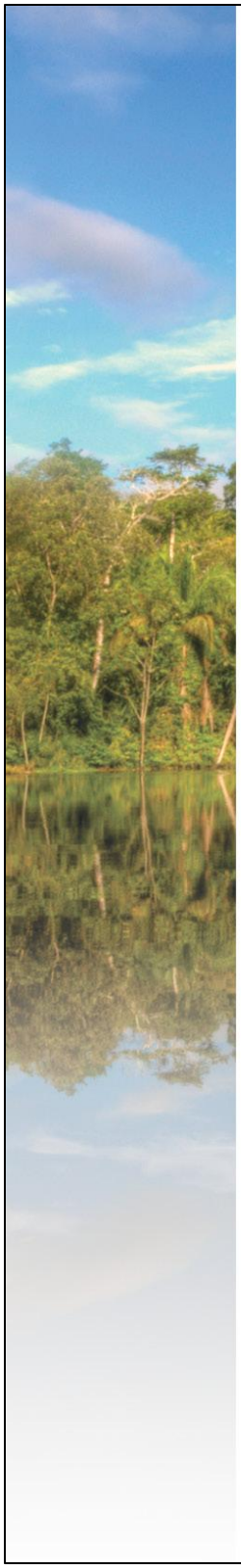
AMAZON MALARIA INITIATIVE

Quarterly Bulletin • November 2015
Volume 2, Issue 4

Photo: PAHO/WHO

Pan American Health Organization
World Health Organization Americas
CDC
SIAPS Systems for Improved Access to Pharmaceuticals and Services
USAID FROM THE AMERICAN PEOPLE USP PROMOTING THE QUALITY OF MEDICINES



Global Malaria News

From October 5–9, 2015, the Pan American Health Organization (PAHO/WHO) organized a series of regional consultation meetings on the Strategy and Plan of Action for Malaria in the Americas 2016–2020 in Punta Cana, Dominican Republic. The meetings were opened by the Dominican Minister of Health, Altagracia Guzmán Marcelino, the PAHO/WHO Country Representative in the Dominican Republic, Alma Morales, the Director of the World Health Organization's Global Malaria Program, Pedro Alonso, and Marcos Espinal, the Director of Communicable Diseases and Health Analysis for PAHO/WHO. Commentary on the draft strategy was provided by participants from 20 malaria-endemic countries, five non-endemic countries, as well as 18 partners and research institutions. All AMI technical partners were represented at the consultation meeting. The stakeholders' input helped to inform the strategic direction of malaria control and elimination in the region for the next five years, in alignment with the WHO's Global Technical Strategy for malaria and the Sustainable Development Goals (SDGs). The consultations concluded with the inaugural meeting of PAHO's Technical Advisory Group (TAG) for malaria as the principal advisory group to PAHO on matters related to malaria in the Americas.

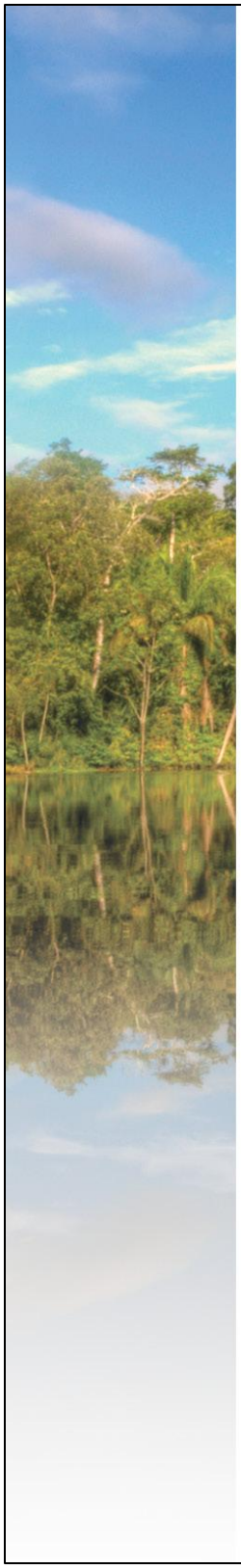
International Partner Highlights

Photo: Jaime Chang

From September 21–October 2, 2015, AMI partners from Belize, Brazil, Honduras, Nicaragua, Panama, Peru, USAID, PAHO/WHO and Links Media participated in the regional edition of the Science of Eradication: Malaria course in São Paulo, Brazil. The course was administered to approximately 100 program managers and members of the research community in malaria-endemic countries. It was hosted at the University of São Paulo's School of Public Health and co-sponsored by the Harvard T.H. Chan School of Public Health, Swiss Tropical and Public Health Institute (Swiss TPH), and ISGlobal — Barcelona Institute for Global Health, with additional support from PAHO/WHO, FAPESP — the São Paulo Research Foundation, the Bill & Melinda Gates Foundation, and the CAPES Foundation. The participation of AMI country representatives was coordinated by PAHO in close collaboration with the São Paulo School of Public Health.

Pan American Health Organization (PAHO/WHO)

Coordinated by PAHO's Regional Malaria Program, an External Quality Assurance Program (EQAP) was established in 2011 with the National Reference Laboratories of Honduras and Peru as Supranational Reference Laboratories which prepared standardized panels of slides for distribution to participating laboratories. The aim of this program is to improve the quality of malaria diagnosis across countries. Four rounds of evaluation have been undertaken from 2011 to 2015, with 21 national reference laboratories participating in the fourth round. Microscopy performance in 2015 compared with the previous rounds showed that there has been satisfactory improvement and achievement of concordance percentage in diagnosis and parasite morphology, but much less so in parasite density estimation and species identification. The evaluation process serves to standardize processes and protocols across countries in the microscopic diagnosis of malaria. With decreasing malaria cases, countries need to prioritize the quality of diagnosis in order to detect each and every case. Given different treatment regimens for *P. falciparum* and *P. vivax* throughout the Americas, countries should focus on species identification and parasite density in order to move towards malaria elimination. In October 2015, PAHO/WHO presented a poster on



the External Quality Assurance Program (EQAP) for Malaria Microscopy Diagnosis in the Countries of the Americas at the 64th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH) in Philadelphia, USA.

PAHO/WHO continues to provide technical assistance for the monitoring of therapeutic efficacy of antimalarial medicines. Currently, all AMI countries using artemisinin-based combination therapies (ACT) for *P. falciparum* implement Day 3 surveillance on all *P. falciparum* positive patients as an early warning system to detect any possible loss in sensitivity to first-line treatments. Following this same approach, the Central American countries supported by AMI follow a routine surveillance system for all positive *P. falciparum* cases, using molecular markers for the detection of possible resistance to chloroquine as the first-line treatment.

Photo: PAHO/WHO

The joint procurement of antimalarial medicines for the region is moving forward. A long-term agreement to procure antimalarials is now available as a result of a tender process completed in collaboration with UNICEF/WHO. The 24/7 strategic stock warehouse in Panama acquired new antimalarials, such as ACTs for imported cases coming from areas where resistance to chloroquine is known, as well as antimalarials for severe cases that can be mobilized rapidly to save lives.

PAHO warehouse activities from July-September 2015 included:

1. ACTs (arthemeter+lumefantrine 6x4) were distributed to 11 countries.
2. Intravenous artesunate and quinine were distributed to 6 countries for severe malaria cases, including to one country in Africa. One positive outcome has been the successful treatment of three severe cases.

As part of surveillance efforts, countries submitted their 2014 malaria morbidity and mortality data to PAHO/WHO to be analyzed and subsequently compiled for the WHO's World *Malaria Report 2015.*

Centers for Disease Control and Prevention (CDC)

From August to September, the CDC hosted an entomologist from Peru's National Institute of Health (INS, by its acronym in Spanish) to be trained on molecular detection of insecticide resistance mechanisms in malaria vectors. The CDC also provided technical assistance to Peru's INS regarding the interpretation of insecticide resistance data to make insecticide recommendations for vector control.

Photo: PAHO/WHO

In December, the CDC will be hosting two entomologists from Honduras to be trained on biochemical assays to detect mechanisms of insecticide resistance and to provide technical assistance in interpreting insecticide resistance data for vector control decision making. In the same month, the CDC will host a researcher from Instituto Evandro Chagas in Belem, Brazil who is working on characterizing molecular mechanisms of pyrethroid resistance recently detected in *Anopheles darlingi* in the Brazilian Amazon.

The CDC disseminated the results from an AMI-supported *in vivo* study on the "Efficacy of Chloroquine and Primaquine in the Treatment of Uncomplicated *Plasmodium vivax* Malaria, Cruzeiro do Sul, Acre, Brazil, 2014" at an oral presentation during the 64th Annual ASTMH meeting. Two posters about molecular analyses of the kelch-13 (K13) antimalarial resistance marker in South America were also presented at the meeting:

- Molecular surveillance for K13 gene and other *Plasmodium falciparum* molecular markers associated with antimalarial resistance in Suriname
- Characterization of the K-13 propeller domain in Guyana for suspected artemisinin resistance

U.S. Pharmacopeial Convention/Promoting the Quality of Medicines (PQM)

Guatemala's Medicines Unit of the National Health Laboratory (OMCL), received ISO 17025 accreditation from ANAB in September 2015, transitioning from a product-based to a method-based accreditation. The expanded scope of this accreditation includes high-performance liquid chromatography (HPLC) testing, as well as spectrophotometry and dissolution tests, strengthening the capacity in country to ensure the quality of medicines, including antimalarials. PQM's laboratory support towards the accreditation was initially provided in the context of AMI, and during the last couple of years was financed by the in-country USAID mission.

Management Sciences for Health/Systems for Improved Access to Pharmaceuticals and Services Program (MSH/SIAPS)

The USAID-funded SIAPS program continued to support Colombia's National Malaria Control Program (NMCP) in the completion and validation of a data collection protocol and instruments. During the next quarter, SIAPS will collect the information in three departments in Colombia. In Brazil, the state malaria programs have scheduled a follow-up monitoring exercise using the same approach for February 2016.

Data collection and analysis for the *Quarterly Bulletin on Availability and Consumption of Antimalarials* showed an increase in the availability of antimalarials in central warehouses from 71% in Quarter 3 to 86% in Quarter 4.

In working with local counterparts and AMI partners in Peru, SIAPS supported coordination meetings to finalize a plan for the introduction of artesunate/mefloquine fixed-dose combination therapy. It is anticipated that this fixed-dose combination will be introduced in selected counties in the region of Loreto in the next quarter, to pilot-test operational procedures for scaling up to the rest of the district.

Credit: SIAPS

In Guatemala, SIAPS provided technical assistance for the introduction of guidelines to support malaria pharmaceutical management in primary health facilities, and to monitor the availability of antimalarials used by primary health volunteers. Trainings for health volunteers will be carried out during the next quarter.

SIAPS will provide technical assistance (TA) to Ecuador on a visit to collect primary data on the country's malaria supply management, and will discuss alternative interventions with national counterparts.

Links Media

From October 6–8, 2015, Links Media participated in the 1st Workshop on Education and Social Participation for Malaria Surveillance and Control organized by the NMCP in Brasilia, Brazil. The purpose of the workshop was to discuss and present health education and social mobilization actions and strategies for malaria. Participants included state level malaria program representatives, professionals from the areas of health education and social mobilization, and representatives from education and research institutions, Ministry of Health, Ministry of Education, Ministry of the Environment, and the Ministry of Cities. Links Media also presented a poster at the 64th Annual ASTMH meeting in Philadelphia, USA, on the role of communication in raising the awareness of key decision-makers and mobilizing resources as more countries in the Americas transition towards elimination.

Country Spotlight

Researchers from **Brazil**'s malaria-endemic and non-endemic areas and international counterparts shared their work at the XIV National Malaria Research Meeting held in São Paulo from October 1–3, 2015. The prospects for eliminating *P. falciparum* malaria in Brazil were discussed, along with innovations in the fields of parasitology, molecular biology, immunology, and vaccine development. The Brazilian Ministry of Health co-sponsored the event. Separately, Brazil has launched a regional epidemiological bulletin with data collected on malaria cases imported from neighboring countries.

Photo: PAHO/WHO

Honduras' supranational laboratory is currently creating a regional slide bank with over 1,000 slides to date with PAHO's support. All samples were tested with PCR prior to their inclusion in the slide bank, following standard operating procedures adapted from WHO's South East Asia Regional Office (WHO/SEARO). Other malaria-endemic and non-endemic countries in the region will be able to borrow panels from the slide bank to sustain their national diagnostic capacity for malaria through trainings and periodic evaluations following quality assurance procedures.

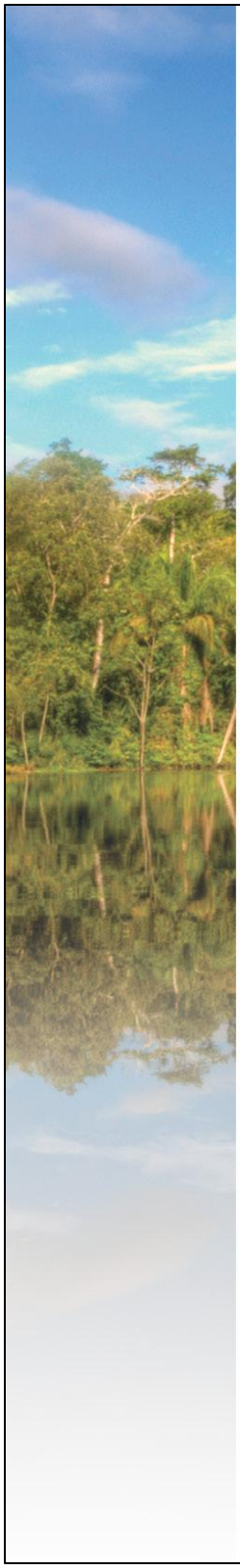


Photo: Jorge Escobedo

In September 2015, **Peru**'s Ministry of Health and the regional government of Loreto contributed additional resources to deploy health brigades to remote areas of the Amazon more frequently in order to address malaria. Thirty health brigades left Iquitos by boat to provide microscopy diagnosis and treatment to riverine populations in light of the ongoing health emergency due to malaria in Loreto. Emphasis was placed on providing timely and efficacious services to communities who live along the Pastaza, Marañón, Tigre and Corrientes rivers.

Calendar of Events

November 2015

143rd American Public Health Association (APHA) Annual Meeting and Exposition,
Chicago, USA,
October 31–November 4, 2015.

Forum of Malaria Networks and Advocates & Regional Launch of Action and Investment to Defeat Malaria (AIM),
Pan American Health Organization headquarters, Washington, USA,
November 5, 2015.

Malaria Day in the Americas,
Region-wide,
November 6, 2015.

November–December 2015

World Malaria Report 2015
release, TBD.

March 2016

AMI/RAVREDA Annual Evaluation Meeting and Semi-Annual Steering Committee Meeting,
Colombia,
March 14–18, 2016.

Photo: PAHO/WHO

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Annex 2: Fact Sheet: Malaria Elimination FAQs

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FROM THE AMERICAN PEOPLE

FACT SHEET 2015-03

AMAZON MALARIA INITIATIVE

MALARIA ELIMINATION
Frequently Asked Questions (FAQs)

November 2015

What is malaria elimination?

The World Health Organization (WHO) defines malaria elimination as the interruption of local mosquito-borne malaria transmission in a defined geographical area, usually a country, as a result of deliberate efforts. Malaria elimination is a continuous process that requires national and community commitment to sustain efforts beyond the achievement of zero cases, in order to prevent reintroduction of the disease.

How is malaria elimination different from malaria eradication?

Elimination refers to the interruption of local malaria transmission in a defined geographical area.[1] Malaria eradication is when malaria has been permanently eliminated on a global level, in other words, once all countries have eliminated the disease.

How is malaria elimination different from malaria control?

Malaria control is on the continuum towards malaria-free status. In the short term, the goal of malaria control is to reduce the disease burden to manageable levels of morbidity and mortality. A country-level malaria control program may have national elimination as its ultimate goal. Elimination seeks to reduce local transmission of the disease to zero cases. Committing to elimination requires a specific set of programmatic interventions, which should be based on the WHO guidelines as well as scientific evidence about what works in the local context.

When does a country receive malaria elimination certification?

A country may request WHO (in the region of the Americas, the Pan American Health Organization) to begin the process to certify malaria elimination after local malaria transmission has been interrupted for at least three consecutive years. At this point, the WHO may grant certification if the country can prove beyond reasonable doubt to an independent certification team designated by WHO that it has met the evaluation prerequisites.

What are some of the WHO prerequisites[2] that my country must achieve for malaria elimination?

- A good surveillance mechanism with full coverage of all geographical areas;
- Quality-assured laboratory services to diagnose malaria;
- Notification and full, immediate reporting by public and private health services, with epidemiological investigation of every malaria infection (case) and focus;
- Vigilant health services for detection, treatment, and follow-up of all possible malaria cases, supported by continued education on malaria for health workers;
- Services to raise awareness and provide practical advice on malaria prevention for nationals traveling abroad;
- Entomological surveillance in receptive areas;
- Systems for early detection of and rapid response to outbreaks;
- Inter-country information-sharing and coordination mechanisms for malaria control and elimination wherever relevant, due to migration patterns or adjacent malarious areas;
- A comprehensive national plan of action with continued political and financial support to carry out activities needed to prevent reestablishment of transmission.

Pan American Health Organization | World Health Organization Americas | CDC | SIAPS Systems for Improved Access to Pharmaceuticals and Services | USAID USP PROMOTING THE QUALITY OF MEDICINES

What are some of the challenges to malaria elimination?

Countries in Latin America and the Caribbean have had a long history of attempting to eliminate malaria. Ensuring political commitment to provide sustainable resources is an ongoing challenge. Other challenges include parasites that may become less sensitive or resistant to certain antimalarial medicines and vectors (mosquitoes) that may become less sensitive or resistant to control measures. For this reason, efforts to combat malaria must continue to monitor resistance and provide adaptive measures to reduce malaria morbidity and mortality.

Will malaria elimination benefit other health issues?

By meeting the WHO prerequisites (see above), a country may be able to strengthen its capacity to address other health issues, particularly vector-borne diseases such as dengue and chikungunya.

Is it possible that a country may have cases of malaria after elimination has been certified?

Yes, there is a possibility for imported malaria cases when travelers carrying the parasite arrive from other countries where they acquired the infection. This may lead to reintroduction of the disease. For this reason, it is important that countries have strong surveillance systems to test, treat, and track all new cases in order to prevent the disease from being reestablished within a malaria-free area.

Is malaria elimination only a health issue? What other sectors should be involved?

Though malaria elimination is led by the health sector, malaria elimination may have positive consequences for other sectors including agriculture, commerce, tourism, and education. Therefore, these sectors should be actively involved in working to eliminate the disease, help identify resources, and commit to supporting efforts beyond zero cases.

With all the other issues in my community, why should I make malaria elimination a priority and commit resources to this effort?

Malaria has a high social cost, as it is linked to reduced educational achievement, prolonged disability, economic difficulties due to lost productivity, and unnecessary loss of life. However, these costs are avoidable. Investing in malaria control and elimination now can help communities to overcome multiple development issues. In the long run, the cost of inaction may be equal to or higher than the additional resources needed to intensify efforts and eliminate the disease.

Have other diseases been eliminated in Latin America and the Caribbean? If so, which ones?

Yes, rubella, polio, and smallpox have been eliminated in Latin America and the Caribbean. Smallpox remains the only disease to date to have been eradicated, meaning it has been eliminated worldwide. Ongoing efforts exist in the region to eliminate other preventable diseases such as river blindness, tuberculosis, and mother-to-child transmission of HIV and syphilis, which has so far been achieved only in Cuba.

Where can I find more information?

You can learn more about malaria elimination from the Ministry of Health in your country, the Pan American Health Organization (PAHO/WHO),[3] the Malaria Eradication Scientific Alliance (MESA),[4] and from regional initiatives including the USAID-funded Amazon Malaria Initiative (AMI),[5] the Elimination of Malaria in Mesoamerica and the Island of Hispaniola (EMMIE) Initiative, and the Malaria Zero Initiative.

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1 See WHO definition: http://www.who.int/malaria/areas/elimination/overview/en/

2 See WHO prerequisites: http://www.who.int/wer/2014/wer8929.pdf

3 PAHO/WHO website: http://www.paho.org

4 MESA website: http://www.malariaeradication.org

5 AMI website: http://www.usaidami.org

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INFORMATIVO AMI 2015-03

INICIATIVA AMAZÔNICA CONTRA A MALÁRIA

ELIMINAÇÃO DA MALÁRIA
Perguntas Frequentes

Novembro de 2015

O que é a eliminação da malária?

A Organização Mundial da Saúde (OMS) define a eliminação da malária como a interrupção da transmissão local de malária por mosquitos em uma área geográfica definida, geralmente um país, como resultado de esforços deliberados. A eliminação da malária é um processo contínuo que requer um compromisso nacional e local para manter os esforços de controle da doença, mesmo após alcançar zero casos, a fim de evitar a reintrodução da mesma.

Como a eliminação da malária difere da erradicação da malária?

A eliminação se refere à interrupção da transmissão local da malária em uma área geográfica definida.[1] A erradicação da malária é quando se consegue eliminar a doença permanentemente a nível global, ou seja, quando todos os países eliminam a doença.

Qual é a diferença entre a eliminação da malária e o controle da malária?

O controle da malária se dá de forma contínua, em direção a uma situação livre da mesma. A curto prazo, o objetivo do controle da malária é reduzir a carga associada a esta doença a níveis de morbidade e mortalidade baixos. Um programa de controle de malária pode ter por objetivo final a eliminação a nível nacional. A eliminação busca reduzir a transmissão local da doença a zero. Para se comprometer à eliminação, é preciso implementar uma série de intervenções programáticas específicas que devem levar em conta as orientações da OMS como base, bem como os dados científicos sobre o que funciona no contexto local.

Quando é que um país recebe a certificação da eliminação da malária?

Um país pode solicitar à OMS (na região das Américas, através da Organização Pan-Americana da Saúde) o início do processo de certificação de eliminação da malária, após a interrupção da transmissão local da doença por três anos consecutivos. Ao chegar a esse ponto, a OMS pode conceder a certificação, desde que o país consiga comprovar, com boa margem de segurança e além de qualquer dúvida razoável, a uma equipe de certificação independente designada pela OMS que cumpriu com os pré-requisitos da avaliação.

Quais são alguns dos pré-requisitos[2] que o meu país deve alcançar para a eliminação da malária?

- Um bom mecanismo de vigilância com cobertura completa de toda a área geográfica;
- Serviços de laboratório com qualidade assegurada para diagnosticar a malária;
- Notificação completa e imediata por parte dos serviços de saúde públicos e privados, com investigação epidemiológica de cada caso de malária e foco de transmissão;
- Serviços de saúde atentos para detecção, tratamento e acompanhamento de todos os suspeitos casos de malária, apoiados pela educação contínua para os profissionais da área da saúde sobre a malária;
- Serviços para sensibilizar e prestar aconselhamento prático sobre como prevenir a malária em pessoas que viajam ao exterior;
- Vigilância entomológica em áreas receptivas;
- Sistemas para a detecção precoce e resposta rápida a surtos;
- Compartilhamento de informação entre países e mecanismos de coordenação para o controle e a eliminação da malária sempre que seja pertinente devido aos padrões de migração ou proximidade a áreas com malária;
- Um plano de ação nacional completo que conte com o apoio político e financeiro contínuo para realizar as atividades que são necessárias para evitar o reestabelecimento da transmissão.

Organização Pan-Americana da Saúde | Organização Mundial da Saúde Américas | CDC | SIAPS Systems for Improved Access to Pharmaceuticals and Services | USAID USP PROMOTING THE QUALITY OF MEDICINES

Quais são alguns dos desafios para a eliminação da malária?

Os países da América Latina e o Caribe têm uma longa história de tentativas de eliminar a malária. Entre os desafios está a falta de compromisso político para fornecer recursos sustentáveis para apoiar os esforços contra a malária. Outro desafio constante é a presença de parasitas que se tornam menos sensíveis ou mesmo resistentes a determinados medicamentos antimaláricos e vetores (mosquitos) que se tornam menos sensíveis ou mesmo resistentes a certas medidas de controle vetorial. Por este motivo, os esforços contra a malária devem incluir o acompanhamento da resistência e a introdução de medidas de resposta para reduzir a morbidade e mortalidade por malária.

A eliminação da malária irá beneficiar outras questões de saúde?

Ao satisfazer os pré-requisitos da OMS (ver acima), um país acaba por fortalecer a sua capacidade de lidar com outras questões de saúde, especialmente outras doenças transmitidas por vetores como dengue e chikungunya.

Após receber a certificação da eliminação da malária, ainda existe a possibilidade do país ter casos de malária?

Sim, existe a possibilidade de haver casos de malária importados quando viajantes infetados trazem a malária de outros países, levando à reintrodução da doença. Por esta razão, é importante que os países mantenham sistemas de vigilância fortes para testar, tratar e monitorar todos os novos casos, a fim de evitar que a doença se reestabeleça dentro de uma área livre da malária.

A eliminação da malária é exclusivamente uma questão de saúde? Quais outros setores deveriam ser envolvidos?

Apesar da eliminação da malária ser dirigida pelo setor da saúde, a eliminação da malária pode ter consequências positivas para outros setores incluindo a agricultura, o comércio, o turismo e a educação. Por esse motivo, estes setores deveriam ser ativos no trabalho de eliminar a doença, identificar recursos e se comprometer a apoiar os esforços além do ponto de atingir zero incidência de malária.

Considerando os outros problemas na minha comunidade, por que devo priorizar a eliminação da malária e destinar recursos a este esforço?

A malária tem um custo social elevado, estando associada ao desempenho escolar reduzido, incapacidade prolongada, dificuldades econômicas devido à perda de produtividade e à redução da sobrevida. No entanto, estes custos são evitáveis. Investir no controle e eliminação da malária agora pode ajudar a comunidade a superar diversas questões de desenvolvimento. A longo prazo, o custo da falta de ação pode ser contabilizado como igual ou superior aos recursos extras que seriam necessários para acelerar os esforços e eliminar a doença de uma vez.

Existe alguma doença que se já conseguiu eliminar na América Latina e o Caribe? Em caso afirmativo, qual?

Sim, rubéola, poliomelite e varíola foram eliminadas na América Latina e o Caribe. Até hoje, a varíola continua sendo a única doença que se erradicou, ou seja, que foi eliminada mundialmente. Existem esforços contínuos na região das Américas para eliminar outras doenças evitáveis como oncocercose ("cegueira dos rios'"), tuberculose e transmissão vertical entre mãe e filho do HIV e da sífilis, que até agora foi alcançado apenas em Cuba.

Onde posso encontrar mais informações?

Saiba mais sobre a eliminação da malária através do Ministério da Saúde no seu país, a Organização Pan-Americana da Saúde (OPAS/OMS),[3] a Aliança Científica para a Erradicação da Malária (MESA)[4] e também pelas iniciativas regionais tais como a Iniciativa Amazônica contra a Malária (AMI)[5] financiada pela USAID, a Iniciativa de Eliminação da Malária na América Central e na Ilha de Hispaniola (EMMIE) e a Iniciativa Malária Zero.

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1 Ver a definição da OMS: http://www.who.int/malaria/areas/elimination/overview/en/

2 Ver os pre-requisitos da OMS: http://www.who.int/wer/2014/wer8929.pdf

3 Página da OPAS/OMS: http://www.paho.org

4 Página de MESA: http://www.malariaeradication.org

5 Página da AMI: http://www.usaidami.org

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HOJA INFORMATIVA 2015-03

INICIATIVA AMAZÓNICA CONTRA LA MALARIA

ELIMINACIÓN DE LA MALARIA
Preguntas Frecuentes

Noviembre de 2015

¿Qué es la eliminación de la malaria?

La Organización Mundial de la Salud (OMS) define la eliminación de la malaria como la interrupción de la transmisión local por los mosquitos en una zona geográfica determinada, que por lo general es un país, como resultado de esfuerzos deliberados. La eliminación de la malaria es un proceso continuo que requiere el compromiso a nivel nacional y comunitario para sostener los esfuerzos, más allá de poder lograr cero casos, para evitar el restablecimiento de la enfermedad.

¿Cuál es la diferencia entre la eliminación y la erradicación de la malaria?

La eliminación se refiere a la interrupción local de la transmisión de la malaria en una zona geográfica definida.[1] La erradicación de la malaria se refiere a la interrupción permanente de la transmisión a nivel mundial, es decir, una vez que todos los países eliminaron la enfermedad.

¿Cuál es la diferencia entre la eliminación y el control de la malaria?

El control de la malaria se ubica en el continuum hacia un estado libre de la malaria. A corto plazo, el objetivo del control de la malaria es reducir la carga de enfermedad a niveles manejables de morbilidad y mortalidad. Un programa nacional de control de la malaria puede tener como su objetivo final la eliminación a nivel nacional de la enfermedad. La eliminación busca reducir la transmisión local de la enfermedad a cero casos. Comprometerse a la eliminación requiere una serie de intervenciones programáticas específicas, que se deben asentar en las directrices de la OMS, así como en las evidencias científicas de lo que funciona en el contexto local.

¿Cuándo un país recibe certificación por haber eliminado la malaria?

El país puede solicitar a la OMS (en la región de las Américas, a través de la Organización Panamericana de la Salud) a iniciar el proceso de certificar la eliminación de la malaria una vez que la transmisión local de la malaria esté interrumpida durante por lo menos tres años consecutivos. Es en ese momento que la OMS puede conceder la certificación si el país puede demostrar más allá de cualquier duda razonable que ha cumplido con los prerrequisitos correspondientes ante un equipo independiente de certificación designado por la OMS.

¿Cuáles son algunos de los prerrequisitos[2] de la OMS que el país debe alcanzar para la eliminación de la malaria?

- Un buen mecanismo de vigilancia con cobertura plena de todas las zonas geográficas;
- Servicios de laboratorio de calidad garantizada para diagnosticar la malaria;
- Notificación e informe completo e inmediato, con una investigación epidemiológica de toda infección (caso) y foco malárico por parte de los servicios de salud públicos y privados;
- Servicios de salud que se mantienen siempre atentos para la detección, tratamiento y seguimiento de todos los posibles casos de malaria, apoyados por la educación continua sobre la malaria para los profesionales de salud;
- Servicios para generar conciencia y proporcionar consejos prácticos sobre la prevención de la malaria para nacionales que viajan al extranjero;
- Vigilancia entomológica en zonas receptivas;
- Sistemas de detección temprana y respuesta rápida a brotes;
- Intercambio de información entre países y mecanismos de coordinación para el control y la eliminación de la malaria, donde sea pertinente debido a patrones de migración o zonas adyacentes con malaria;
- Un plan integral de acción nacional con apoyo financiero y político constante para realizar las actividades necesarias para prevenir el restablecimiento de la transmisión.

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¿Cuáles son algunos de los retos para la eliminación de la malaria?

Los países de América Latina y el Caribe tienen una larga historia de lucha contra la malaria. Asegurar el compromiso político en la provisión de recursos sostenibles es siempre un reto. Otros incluyen parásitos que pueden volverse resistentes o menos sensibles a ciertos medicamentos antimaláricos y vectores (mosquitos) que pueden volverse menos sensibles o resistentes a determinadas medidas de control. Por esta razón, se debe continuar a monitorear la resistencia y proporcionar medidas adaptivas para reducir la morbilidad y mortalidad por malaria.

¿Podría la eliminación de la malaria beneficiar a otros problemas de salud?

Por cumplir con los prerrequisitos de la OMS (ver más arriba), es posible que el esfuerzo para eliminar la malaria también ayude en los esfuerzos para combatir otras enfermedades, especialmente las enfermedades transmitidas por vectores como el dengue y la chikungunya.

¿Es posible que un país tenga casos de malaria después de recibir la certificación de eliminación?

Sí, existe la posibilidad de tener casos de malaria importados cuando llegan viajeros que traen la enfermedad que han adquirido en otro país y esto puede ocasionar la reintroducción de la enfermedad. Por esta razón, es importante que los países tengan sistemas de vigilancia fortalecidos para poder diagnosticar, tratar y monitorear todos los nuevos casos y así impedir el restablecimiento de la enfermedad en zonas libres de malaria.

¿La eliminación de la malaria es un problema solo para la salud? ¿Qué otros sectores deben participar?

Aunque la eliminación de la malaria es mayormente dirigida por el sector de salud, la eliminación de la malaria tendrá implicaciones positivas para otros sectores, como para la agricultura, el turismo y la educación. Por ende, estos sectores deben participar activamente en los esfuerzos de eliminación, para ayudar a identificar recursos y comprometerse a apoyar los esfuerzos para avanzar más allá de cero casos.

¿Con tantos problemas en la comunidad, por qué la eliminación de la malaria y la consigna de recursos es prioritaria?

El costo social y económico de la malaria es elevado, al estar ligado a la reducción de rendimiento escolar, la incapacidad prolongada, la baja productividad, y la pérdida innecesaria de vidas. Estos costos son evitables y la inversión inmediata en el control y la eliminación de la malaria puede contribuir a superar varios problemas de desarrollo. A largo plazo, el costo de la inacción puede ser mayor o igual que los recursos adicionales necesarios para intensificar los esfuerzos y eliminar la enfermedad.

¿Se han eliminado otras enfermedades en América Latina y el Caribe? ¿Cuáles?

La rubéola, poliomielitis y viruela han sido eliminadas en América Latina y el Caribe. La viruela es la única enfermedad que ha sido erradicada, es decir, que se ha eliminado en todo el mundo. En la región, existen esfuerzos continuos para eliminar otras enfermedades prevenibles como la oncocercosis, tuberculosis y la transmisión materno-infantil del VIH y de la sífilis, que hasta ahora solo se ha logrado en Cuba.

Para más información:

Más información acerca de la eliminación de la malaria se puede obtener a través del Ministerio de Salud en su país, la Organización Panamericana de la Salud (OPS/OMS),[3] la Alianza Científica para la Erradicación de la Malaria (MESA)[4] e iniciativas regionales, entre ellas la Iniciativa Amazónica Contra la Malaria (AMI)[5] financiada por la USAID, la Iniciativa de Eliminación de la Malaria en Mesoamérica y la Isla Española (EMMIE), y la Iniciativa Cero Malaria.

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1 Vea la definición de la OMS: http://www.who.int/malaria/areas/elimination/overview/es/

2 Vea los prerrequisitos de la OMS: http://www.who.int/wer/2014/wer8929.pdf

3 Página de la OPS/OMS: http://www.paho.org/esp/

4 Página de la MESA: http://www.malariaeradication.org

5 Página de la AMI: http://www.usaidami.org

Annex 3: Fact Sheet: Selected References on Malaria Elimination (in Spanish)

USAID
DEL PUEBLO DE LOS ESTADOS UNIDOS DE AMÉRICA

HOJA INFORMATIVA 2015-02

INICIATIVA AMAZÓNICA CONTRA LA MALARIA

REFERENCIAS SELECCIONADAS SOBRE LA ELIMINACIÓN DE LA MALARIA

Noviembre de 2015

Las siguientes referencias consisten de herramientas e información que los programas nacionales de malaria pueden utilizar para tomar decisiones informadas al abordar las actuales tendencias epidemiológicas, progresando simultáneamente hacia la eliminación de la malaria a largo plazo.

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Organización Panamericana de la Salud | Organización Mundial de la Salud Américas | CDC | SIAPS Systems for Improved Access to Pharmaceuticals and Services | USAID USP PROMOTING THE QUALITY OF MEDICINES

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Annex 4: Fact Sheet: Malaria in Low-Incidence Settings

2015-02
September 2015

FACT SHEET: Malaria in Low-Incidence Settings: Challenges for Control and Elimination

1. Monitoring the Efficacy of and Resistance to Antimalarial Medicines

The emergence of antimalarial resistance is a concern in the Americas. In South America, *Plasmodium falciparum* parasites are resistant to chloroquine, and the WHO is concerned that parasites may develop resistance to the antimalarial drug artemisinin as well as partner drugs in artemisinin based combination therapies.

- Lower incidence of malaria poses challenges for the feasibility of *in vivo* studies to test the efficacy of antimalarial medicines. Lack of resources to monitor patients under controlled conditions makes it more difficult to monitor the efficacy of medicines.
- Health science researchers need to find new *in vitro* or molecular markers to complement *in vivo* studies. Such markers make it possible for health systems to track antimalarial resistance as it emerges; however, reliable markers are not available for all parasite species. More research and innovation is needed, but is rarely supported in low-incidence settings.

Countries in Latin America and the Caribbean need to use the best combination of available tools for monitoring efficacy of antimalarials. The Amazon Malaria Initiative (AMI) and the Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA, by its acronym in Spanish) join resources for operational research and innovation across the entire region, and standardize malaria research protocols so that multi-site studies are possible.

2. Maintaining Laboratory Capacity for Malaria Diagnosis

Microscopy remains the gold standard method for malaria diagnosis. However, as cases become less frequent, laboratory staff may have fewer opportunities to practice microscopy skills acquired for reading thick and thin blood slides. Supervision, as well as continued education and training opportunities for microscopists are essential to ensure that personnel develop expertise in this area and maintain their skills and capacities to properly diagnose malaria. AMI supported regional trainings and has helped to develop a quality assurance system to improve malaria diagnosis capacities across countries. Low incidence of malaria can result in:

- Community health workers and health professionals mistaking signs and symptoms of malaria for other febrile illnesses.
- Health professionals failing to confirm clinical symptoms of malaria with proper laboratory diagnosis.
- Personnel losing the skills required to make a diagnosis and provide treatment.
- Malaria incidence and prevalence are under-reported to national surveillance systems.
- Increased probability of cases of severe malaria, as well as reintroduction and outbreaks.

WHO recommendations on malaria diagnostics in low-transmission settings[2]

1. Quality-assured rapid diagnostic tests (RDTs) and microscopy are the primary diagnostic tools for confirmation and management of cases of suspected clinical malaria in all epidemiological situations, including areas of low transmission, because of their good performance in detecting clinical malaria, their widespread availability and their relatively low cost. Similarly, RDTs and microscopy are appropriate for routine malaria surveillance (of clinical cases) in most malaria-endemic settings.

2. Several nucleic acid amplification techniques (NAA) are available, which are more sensitive in detecting malaria than RDTs and microscopy. Generally, use of highly sensitive diagnostic tools should be considered only in low-transmission settings where there is already widespread malaria diagnostic testing and treatment and low parasite prevalence rates (e.g. < 10%). Use of NAA-based methods should not divert resources from malaria prevention and control or from strengthening of health care services and surveillance systems.

3. Sub-microscopic *P. falciparum* and *P. vivax* infections are common in both low- and high-transmission settings. Use of NAA methods in malaria programmes should be considered for epidemiological research and surveys to map sub-microscopic infections in low-transmission areas. NAA methods might also be used for identifying foci for special interventions in elimination settings.

4. In most infections with asexual parasites, gametocytes are detectable by molecular amplification at densities that are not detectable by microscopy or RDTs. Most malaria infections (microscopic and sub-microscopic) should be considered potentially infectious and therefore potential contributors to ongoing transmission. Sensitive NAA methods are not required for routine detection of gametocytes in malaria surveys or clinical settings.

[2] WHO. Policy brief on malaria diagnostics in low-transmission settings; September 2014 http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&Itemid=270&gid=30398&lang=en

5. Common standards should be set for nucleic acid-based assays. The WHO international standard should be followed for *P. falciparum* DNA amplification assays, and standards should be set for other *Plasmodium species*, particularly *P. vivax.* A standard operating procedure should be prepared for sample collection and extraction and for the equivalent quantity of blood to be added to the assay. Development of an international external quality assurance system is strongly recommended to ensure that data obtained from NAA assays are reliable and comparable.

6. In order to define the role of serological assays in epidemiological assessments, the reagents (antigens and controls), assay methods and analytical approaches should be standardized and validated.

3. Epidemiological Surveillance – Low Parasite Loads Difficult to Detect

Low-incidence areas may have more subclinical infections, meaning that infections may be asymptomatic or parasite density may not be enough to be observed under a microscope.[3] With very low density, only more sensitive methods like polymerase chain reaction (PCR) or molecular analysis can detect the presence of parasites in the blood. This makes it more costly to detect and eliminate the human disease reservoir, which is a key control strategy in low-incidence settings.

Applications of malaria diagnostic tests in low-transmission settings

Low-transmission setting	Diagnostic technique	Comments
Routine surveillance and passive case detection	High-performance microscopy and quality-assured RDTs	
Malaria epidemiological surveys	A substantial proportion of infections are missed by microscopy and RDTs because of low parasite-density infections. An NAA-based test with an analytical sensitivity of about 2 parasites/µL will be a significant improvement over expert microscopy. Classic Polimerase chain reaction (PCR), quantitative PCR and Loop-mediated isothermal amplification (LAMP) can meet this specification if performed properly, but other validated, non-NAA-based tests with similar performance would be acceptable.	It is recommended that at least 50 µL of blood be collected from each individual and that the eluate used in the assay be derived from a minimum of 5 µL of blood. It might be acceptable to use smaller quantities of blood in assays with RNA targets if the targets are homogeneously mixed into the extracted material. Rapid turn-around times are not a high priority. Internal and external quality assurance procedures should be in place.

[3] Silva-Nunes, M et al. 2012. Amazonian malaria: Asymptomatic human reservoirs, diagnostic challenges, environmentally-driven changes in mosquito vector populations, and the mandate for sustainable control strategies. *Acta Trop*, 121(3):281-291.

Focus investigations; reactive infection detection after identification of an index case	The NAA-based test should have an analytical sensitivity of 2 parasites/µL or 10 parasites in 5 µL of blood analysed. Field-adapted classical PCR, quantitative PCR and LAMP methods are appropriate, and a mobile laboratory may be a useful option.	Results should be available within < 48 h to allow prompt follow-up and treatment of positive cases. The choice of providing high-throughput, highly sensitive services at a location far from the field or lower-throughput, less sensitive NAA-based testing close to the point of care with rapid results depends on the context. Quality assurance, including external quality assurance, should be in place for the analytical technique chosen.
Mass screening and treatment	RDTs and microscopy are not sufficiently sensitive for mass screening and treatment programmes in low-endemic settings. A moderate throughput test with an analytical sensitivity of 2 parasites/µL should be used to ensure identification of asymptomatic and low-density infections. Field-adapted classic PCR, quantitative PCR and LAMP methods are appropriate, and a mobile laboratory may be a useful option.	Results should ideally be available on the same day as testing, to maximize follow-up of individuals and provision of treatment. Quality assurance, including external quality assurance, should be in place for the analytical technique chosen.
Screening of special populations (e.g. at border crossings)	The local context will determine the most appropriate, cost-effective tools and whether screening at borders is feasible and useful. If screening of special populations is deemed appropriate, RDT or microscopy should be used for symptomatic infections only, and NAA-based tests with an analytical sensitivity of 2 parasites/µL should be used to detect infection in asymptomatic individuals.	Results should be provided on the same day in order to minimize loss to follow-up.

4. Treatment – Ensuring Access to Quality Medicines

Concentration of malaria incidence in remote locations with poor accessibility and/or among special populations makes supply chain management of antimalarial medicines more difficult.[4]

[4] Management Sciences for Health. Malaria Pharmaceutical Management in Low-Incidence Settings: Lessons Learned from the Americas. PowerPoint presentation made on behalf of the USAID-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program. April 25, 2014. URL: linksmedia.net/AMI/extras/MalariaPharmMgmt.pdf

The main trends are that:

- Pharmaceutical vendors no longer have a business interest in selling the reduced volumes that are now required.
- Areas with low or no incidence fail to receive medicines, even when the risk of reintroduction is high.
- The informal private sector sells antimalarial medicines of questionable quality, some of which are counterfeit.
- Low turnover of medicines may lead medicine efficacy to decline in poor storage conditions (e.g. high temperature, humidity, direct exposure to sunlight, deficient refrigeration).
- Insufficient resources for ensuring medicine quality assurance and control limit the ability of health professionals to collect statistically representative samples of medicines for quality testing.[5]
- As countries move closer to elimination, providing access to quality medications, particularly to mobile, migrant, and indigenous populations, becomes more important to the overall success of malaria programs.[6]
- Medicines purchased may expire before they are needed.

AMI has facilitated the joint procurement of antimalarial medicines through the Pan American Health Organization (PAHO/WHO) Strategic Fund. In addition, AMI created guidelines on the programming of medicines in low-incidence areas, and has worked with health systems to improve special populations' access to prevention, diagnosis, and quality treatment. Expanded access to free, quality antimalarial medicines through the public sector helps to make unregulated medicines less appealing.
Where needed, AMI works with health systems to improve pharmaceutical access and storage conditions at the decentralized level. AMI also provides training, reference standards and manuals, and supplies for countries' medicine regulatory agencies and official medicine control laboratories.

5. Communication and Stakeholder Engagement

Low incidence, coupled with the fact that malaria disproportionately affects poor and marginalized populations, may lead to malaria's disappearance from the public policy agenda. As malaria incidence decreases, the health system shifts its focus and loses efficiencies in surveillance and other key interventions. Abandonment of malaria threatens gains against the disease by weakening the implementation of technical

[5]Barillas, E., Barojas, A, y V. Pribluda. 2011. Documento estratégico para la gestión del suministro y garantía de la calidad de los medicamentos e insumos para el diagnóstico y tratamiento de la malaria. Preparado por el Programa Strengthening Pharmaceutical Systems (SPS) de Management Sciences for Health (MSH), el Programa Promoting the Quality of Medicines Program (PQM) de la Farmacopea de Estados Unidos de América (USP, inglés) y Links Media, LLC. para la Agencia de los Estados Unidos para el Desarrollo Internacional (USAID) bajo la Iniciativa Amazónica Contra la Malaria. Gaithersburg, MD: Links Media, LLC. URL: http://usaidami.org/extras/DocumentoEstrategicoyGestioncalidadmedicamentos.pdf

[6] World Health Organization. 2015. *Global Technical Strategy for Malaria 2016-2030*, p. 8.

interventions, the provision of continuous training to health personnel, and ongoing investments in research and innovation are needed in order to accompany genetic changes in malaria parasites and mosquitoes. [7,8,9] Prevention, diagnosis, treatment, and detection of drug resistance measures suffer, leaving the health system unprepared to deal with the reintroduction of malaria.

Main challenges are that:

- Institutions lose the capacity to respond to outbreaks.
- Public and private sectors reduce investments in malaria research and innovation; operational research to assess the effectiveness of key interventions stops.
- Support for implementation of key technical interventions declines, creating problems for maintaining a strong surveillance system, keeping good quality diagnosis capacity in place, as well as a constant supply of quality medications, and continuing to provide education to health professionals and patients.
- Affected communities perceive lower risk and stop using proven prevention methods.

AMI communicates and advocates for the continuation of scientifically sound technical interventions and the documentation of efforts to enable learning and knowledge sharing about state-of-the-art best practices. This strengthens health systems' ability to adapt and respond to changes in malaria incidence. In addition, AMI develops relevant and timely malaria communication strategies that promote key evidence-based messages, disseminate knowledge, and build alliances with a wide range of stakeholders.

Last updated on October 27, 2015

[7] Nájera JA, González-Silva M, Alonso PL (2011) Some Lessons for the Future from the Global Malaria Eradication Program (1955–1969). *PLoS Med* 8(1): e1000412. http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000412 Published: January 25, 2011

[8] Malaria Consortium. World Malaria Day 2014: Lessons from the past – can malaria ever be eradicated? http://www.malariaconsortium.org/news-centre/lessons-from-the-past-can-malaria-ever-be-eradicated.htm

[9] Cohen, J. et al. Malaria resurgence: a systematic review and assessment of its causes. *Malaria Journal* 2012, 11:122 http://www.malariajournal.com/content/11/1/122

Annex 5: Media Outreach for Malaria Day in the Americas 2015

Guest opinion editorial drafted for top Peruvian news outlet *El Comercio*

El pasado 6 de noviembre, el Día de la Malaria en las Américas, los países de la región conmemoraron la reducción de los casos de malaria por más de 67% desde el año 2000. Con casi 125 millones de personas en riesgo de contraer la enfermedad en las Américas, la malaria sigue siendo un problema. Sin embargo, muchos líderes creen que la eliminación de la malaria es posible. De hecho, 14 países de las Américas se han comprometido a reorientar sus programas de control hacia la eliminación de la malaria.

Esta no es la primera vez que los países de las Américas vislumbran la eliminación de la malaria. Se propuso eliminar la enfermedad a nivel mundial en los años 1950s–1960s. En aquella época, algunos países tuvieron éxito en acabar con la malaria, mientras otros pasaron por una resurgencia de la enfermedad después de llegar muy cerca de la eliminación. A partir de esta experiencia se aprendió que los compromisos políticos y financieros tienen que sostenerse en el tiempo. Además, se aprendió que no se podía depender del uso de DDT como la única solución, mas bien el éxito de cualquier plan de eliminación depende del despliegue de varios componentes como el diagnóstico, tratamiento, manejo integrado de vectores, vigilancia y comunicación social.

Algunos países en las Américas vienen reduciendo sus esfuerzos contra la malaria a nivel nacional, porque los casos son cada vez más escasos. Esto es un error, principalmente para países que tienen miras a la eliminación. Al disminuir los esfuerzos y recursos tanto humanos como financieros, los sistemas de salud pierden su capacidad de prevenir, detectar y controlar la malaria. Más aún, la situación se agrava y el riesgo aumenta para las poblaciones ubicadas en zonas remotas de la cuenca del Amazonas, donde los habitantes carecen de servicios de salud de calidad para el diagnóstico y tratamiento. Por su vez, los parásitos se adaptan rápidamente a medidas de prevención, detección y control implementadas por los países. Parásitos que se vuelven resistentes a los medicamentos y mosquitos trasmisores de la malaria que se vuelven resistentes a insecticidas presentan grandes retos que amenazan los avances obtenidos.

Pese a las dificultades, los países de las Américas ahora están mejor posicionados que nunca para eliminar la malaria. Varios avances científicos como tratamientos combinados y nuevas clases de insecticidas han sido adoptados. Considerando que ninguna intervención es una panacea, se usa una combinación de intervenciones basadas en las evidencias. Gracias al apoyo técnico obtenido a través de redes regionales como la Iniciativa Amazónica contra la Malaria (AMI) y la Red Amazónica de Vigilancia de la Resistencia a los Antimaláricos (RAVREDA) los países han acelerado sus esfuerzos contra la malaria. Estas redes posibilitan la coordinación de la investigación operativa, el intercambio de datos, el suministro de medicamentos de emergencia y el refuerzo de la capacidad local para hacer frente a la malaria.

Desde el año 2000, países de la región han invertido mucho tiempo y dinero en reducir el número de casos de malaria. Las autoridades nacionales deben continuar trabajando para eliminar la malaria.